

**ABSTRACT**

Multiple transmitters generate repetitive waveforms having similar values of center frequency  $F$  and bandwidth  $B$  that are modulated with different information signals having bandwidth  $SB$ . Each transmitter generates a waveform having a unique repetition rate. The modulated waveforms are coupled into a communication channel. A receiver receives and separates the transmitted signals using a coherent correlation process, such as interferometry. The combining process extracts signals having a repetition period corresponding to a relative delay applied to consecutive waveforms. Waveforms having non-corresponding repetition periods combine non-coherently, thus enabling signal demultiplexing to be performed with respect to waveform repetition periods.

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